

## REMARKS/ARGUMENTS

Claim 1 has been substantially amended and includes some material that had been in dependent claims, including claim 5. Claim 2 has been amended to add material from original claim 3.

Claim 4 has been canceled. New claim 10 has been inserted. It is somewhat different in scope than claim 4 and particularly concerns the step of maximizing the net buoyant force.

The change to claim 1 avoids a doubtful interpretation of its original language. Excess liquid phase binder beneath the close packed array flows from the mold, redefining the previous expression of draining excess liquid phase binder. The causing is further defined in claim 7 as draining from the bottom of the mold.

Claims 1-9 were rejected over Australian patent application to De Toffol or the corresponding U.S. patent to De Toffol. Reconsideration is again requested.

Claim 1 indicates that the liquid phase binder includes a predetermined amount of diluent that is selected to maximize the net buoyant force acting on the microspheres when they are placed in the binder. This feature is not suggested in the prior art. Further, the step of allowing the microspheres to float to the top of mixtures is modified to indicate that the allowing occurs until the microspheres form a close packed array, again not suggested in the prior art. Further still, claim 1 recites that the excess liquid phase binder that is caused to flow is the binder beneath the close packed array of microspheres. This causes or permits the array to settle to the bottom of the mold, as claim 1 recites. That the removal of the liquid phase binder may be caused by draining it from the bottom of the mold is still indicated in claims 7 and 8.

Significant characteristics of the way to achieve the buoyant force on the microspheres are defined in claim 10.

Applicant here comments on the Examiner's responses to Applicant's previous arguments and on the Examiner's comments about the previous claims. The Examiner indicates, but without citation to any portion of the reference, that the microspheres in De Toffol flow to the top due to their buoyant nature. There is no description of suggestion of that in the references. The Examiner is effectively suggesting that it is not possible that the microspheres in De Toffol will remain mixed without floating, although De Toffol does not suggest that. The capability of

microspheres not floating out of a mixture is contemplatable. De Toffol apparently does not suggest the upward floating of the microspheres and does not rely upon upward floating in the steps of his process.

The Examiner says that the claims did not to the Examiner's satisfaction specify an amount of microspheres to float to the top of the mixture. Applicant's amended claim 1 notes that they float to the top of the mixture until they form a close packed array. De Toffol does not describe floating of microspheres and certainly does not suggest floating to form a close packed array, so that the claimed desired degree is not suggested in De Toffol. There is no suggestion in the reference that microspheres will float to the top, and particularly that they will form a close packed array in De Toffol and to suggest that requires speculation not based on anything said or suggested in De Toffol.

The Examiner shifts a burden to the Applicant to provide evidence that microspheres in the composition of De Toffol will not float to the top of the mixture. I do not believe that the Applicant has the burden of disproving the occurrence of an alleged possible event in a prior art reference if the prior art itself does not disclose that occurrence, nor deal with the possibility of or the result of that event. The Examiner should make a *prima facie* showing that the prior art teaches something. Speculation is not enough. The Applicant should not be required to show that prior art, which does not disclose a particular occurrence, does not inherently perform in the manner recited in the claim. The rejection based on what De Toffol teaches is based on speculation, as illustrated by phrases in the rejection like "it is quite possible", "at least some of the microspheres must float to the top", and "it is reasonably believed that the microspheres become inherently close packed". These show that there is no relevant teaching in De Toffol, just speculation about its teaching.

Lastly, with respect to the Examiner's comments concerning the draining step, Applicant has not restricted claim 1 particularly to draining, but rather has indicated that there is excess liquid beneath the close packed array of microspheres and it is that liquid beneath the close packed array that is drained. De Toffol does not drain liquid that is beneath the close packed array, because De Toffol has no suggestion or disclosure of a close packed array or of a flow from the close packed array.

The Examiner states that wicking away liquid is equivalent to draining. Applicant respectfully disagrees. It is submitted that there is no "flow" along a wick. Rather, a wick transfers material by capillary action as a result of the characteristic of the wick material itself. A flow, in contrast, is usually caused either by gravity, or a siphon effect or reduced pressure, causing the liquid to flow as a liquid, and not to be drawn along a wick. Consequently, claim 1 which talks of flow and even the dictionary definition of drain to which the Examiner refers distinguishes flow from a wicking action. The Examiner has misconstrued the word "drain" to cover an action that is not defined in the Examiner's dictionary definition and which is a different action than had been claimed by the Applicant.

De Toffol does not teach the formation of a close packed array of microspheres floating on a liquid binder and then draining the liquid from beneath the array or permitting the liquid to flow from beneath that array. In the prior art, including De Toffol, the selection of the liquid phase binder characteristics and the typical time used for curing would not permit microspheres to form a close packed array, as described in Applicant's method claim 1 and the claims following it.

Further, Applicant's method of maximizing the net buoyant force acting on the microspheres when placed in the binder, as covered in claim 10, is not suggested in De Toffol, first because De Toffol is not concerned with maximizing the buoyant force and secondly because this particular method of maximizing is not disclosed in De Toffol.

In summary, it is submitted that the claims as amended distinguish from De Toffol and that the claims therefore are allowable over the prior art.

EXPRESS MAIL CERTIFICATE

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail to Addressee (mail label #EV605031757US) in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on August 18, 2006

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Respectfully submitted,



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